

PRINTERS & SCANNERS

FAQ

Q Can I get a colour laser printer that will be able to print good quality photos?

A No. Home and office laser printers can produce great-looking business graphics, but they're not good at printing photos. Some colour lasers, such as Oki's C5750n (opposite), can produce glossy-looking finishes on their image prints, but their lower resolutions mean photos will be grainier than even the cheapest inkjet.

In fact, Canon's £30 PIXMA iP2600 (right) has a higher resolution than any laser printer we've seen. It also uses dye-based inks, which are designed for precise colour and shading.

HP recently introduced 220gsm Laser Gloss Photo Paper for its range of Color Laserjets. We haven't been able to test it yet, but as soon as we do, we'll report on the results.

Kat Orphanides

Printers and audio expert

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CANON PIXMA iP2600

★★★★★

£30 inc VAT

From www.novatech.co.uk

Canon's tiny PIXMA iP2600 manages to avoid the technical pitfalls usually associated with budget inkjets. It's sturdy and well designed, without any of the paper-feeding difficulties that we've previously encountered with some of Canon's cheapest models. Its top paper tray can hold up to 100 sheets of A4, and a flap at the front of the printer conceals an output tray that can be folded down and outwards. The whole printer takes up remarkably little space, occupying an area of just 442x253mm with its trays folded away.

The iP2600 is a four-colour inkjet and comes with two standard-sized cartridges capable of printing up to 215 pages of mono and 206 pages of colour, or 79 6x4in photos. The photo-printing process uses a composite black made up of the cyan, magenta and yellow inks in the colour cartridge; black ink is used for printing only on plain paper. High-yield PG-40 black and CL-41 colour cartridges are also available, which produce up to 327 black and 303 colour pages respectively. Although this is more economical than buying standard cartridges, print costs are still among the most expensive around. A combined A4 page of black and colour printing will cost around 7.5p, compared to 4p per page for Canon's PIXMA iP4500 or 5.5p per page for Lexmark's Z1320 (see 'Also consider...', opposite and page 32).

However, the iP2600's print quality far exceeds that of the Lexmark, and comes close to rivaling that of Canon's more expensive printers. Even draft-quality text looked good enough to use for almost any purpose and was



only slightly lighter than the dark, solid characters produced at normal quality. Print speeds didn't differ much between the two modes, with draft text emerging only 0.6ppm faster.

Colour documents were rather slow to print but were very accurate, with rich colours and few flaws visible in our test images. Some of the text in the same documents looked rather fuzzy and had a slight coloured halo around it, though. Photos were the best we've seen from such a low-cost printer, with vivid colours and a smooth, glossy finish. Flesh tones were accurate and details were faithfully reproduced, while print speeds were surprisingly fast.

We found very little to fault in this printer's quality but, like most budget inkjets, it's expensive to run. The iP2600 is similar to the Canon PIXMA iP1800 (reviewed in *Shopper* 238), but the new model is better designed and built. It has a proper output tray, and it is easy to load paper. The PIXMA iP2600 is an excellent choice if you want a compact printer for infrequent use, but if you do a lot of printing the money you save on its purchase price will soon be outweighed by its high print costs.

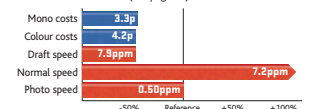
Kat Orphanides

SUMMARY

- ✓ Affordable to buy
- ✓ Good print quality
- ✗ High print costs

FOUR-COLOUR INKJET 4,800x1,200dpi maximum resolution, USB Hi-Speed interface
PART CODE 2435B008AA
DETAILS www.canon.co.uk

PERFORMANCE (see page 58)



Also consider...

SAMSUNG ML-2510

★★★★★

£51 inc VAT

From www.ebuyer.com



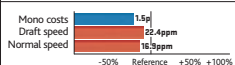
This grey laser printer may look a little drab, but

it's easy to set up and quick to install. Samsung's ML-2510 has a 250-sheet covered input tray and a single-sheet multipurpose feed slot, although it crumples envelopes.

It peaked at 22.7ppm when printing text, which is impressive for such an affordable printer. It's also cheap to run, with a cost per page of around 1.5p, yet it produces high-quality text and mono graphics. It's a great compact budget mono laser printer.



MONO LASER PRINTER 1,200x600dpi resolution, 24ppm maximum speed, parallel and USB Hi-Speed interfaces
PART CODE ML-2510
DETAILS www.samsung.co.uk
FULL REVIEW Oct 2006



CANON PIXMA MP520

★★★★★

£73 inc VAT

From www.lambda-tek.com/componentshop

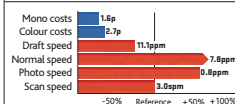


The PIXMA MP520 combines an affordable price with quick print speeds and low page costs. Even at draft quality, its text document

prints looked great, while its normal-quality prints were laser-sharp. Draft prints were slow, but normal-quality documents printed at 7.8ppm. Photo prints were good, too. The scanner interface doesn't list its top resolution of 1,200x2,400dpi, but you can set this manually. Scans at all resolutions were sharp and accurate.



COLOUR INKJET MFP 4,800x1,200dpi print resolution, 30ppm mono/20ppm colour maximum speed, 1,200x2,400dpi scan resolution, USB Hi-Speed, PictBridge USB interfaces
PART CODE 2178B008AA
DETAILS www.canon.co.uk
FULL REVIEW Jan 2008



OKI C5750n



£457 inc VAT
From www.b4udirect.com

Oki's C5750n colour laser is aimed at businesses that need a printer to handle both demanding image-printing tasks and high-speed mono print runs. It has parallel, USB and Ethernet ports, and maintenance and configuration tools are available through a two-line LCD screen. There's also a web interface for remote administration.

The C5750n was easy to set up. Toner cartridges were shipped inside the printer and just had to be removed from their protective packaging before being slotted back into place. The installation program failed to auto-detect the printer on our network, but the C5750n can display its own IP address, which we entered directly into the installer.

Both PCL and PostScript drivers are included, as well as colour profile tools and Oki's Template Manager for printing on non-standard media. A multipurpose tray for special media can handle paper and card stock up to 203gsm as well as transparency sheets, labels and envelopes without creasing or curling. It can alternatively take up to 100 sheets of 80gsm A4. The main paper tray holds 300 sheets of A4.

The C5750 defaults to its 1,200x600dpi Fine resolution, but we chose the 600x600dpi Normal setting in the PCL driver for testing. Mono text quality was phenomenal, with sharp reproductions of even tiny

characters. Print speeds were fairly quick, although our mono test result of 22.7ppm was a long way from Oki's quoted 32ppm; draft mode was no faster. Text documents at Fine quality printed at 20.3ppm.

The results of our colour print tests were less consistent. All prints had a glossy finish, which gave a professional touch to graphics and business documents. However, the PCL driver gave images a marked purple tint, particularly visible on photos.

The highest ProQ2400 quality setting is intended to create glossy prints with less graininess and more accurate greyscale. This should be ideal for photos, but only made our prints look more purple. A Photo Enhancement option eliminated the tint, but at the cost of overall image quality. Colour profile options didn't correct this and slowed print speeds to a crawl.

The PostScript driver didn't suffer from this problem but printing took almost twice as long, with two Fine-quality 10x8in photo images printing in 55 seconds, compared to 28 seconds using PCL. Using the PCL driver, colour prints emerged at a respectable 15.2ppm, but fell short of the quoted 22ppm.

The C5750's running costs can soon mount up. Colour cartridges last for just 2,000 pages each, which isn't



enough for a workgroup printer, and a set of three costs £135 inc VAT. The four image drums must be changed every 20,000 pages at a total cost of £120. Meanwhile, the fuser unit and transfer belt both last 60,000 pages and cost around £50 each. The starter cartridges contain enough toner for 2,250 pages, but 750 pages of that is used to charge the image drums.

All colour laser printers are expensive to run, but at £4,039 for three years of heavy use (72,000 mono and 36,000 colour pages), the C5750n costs over £1,200 more than the least economical printer in our colour laser group test in *Shopper* 240. Costs for medium and light use were also very high.

The C5750n's fast, economical mono text prints looked great, but although colour prints were glossy, they suffered from painfully slow PostScript speeds and poor PCL colour balance. This, along with high running costs, makes the C5750 a poor choice. A high-quality mono laser would cost less to buy, while less expensive colour workgroup printers such as Brother's HL-4050CDN (see *Shopper* 240) can produce more accurate colour at only slightly slower speeds.

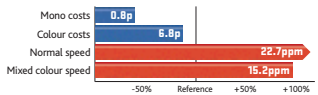
Kat Orphanides

SUMMARY

- ✓ Fast, high-quality mono prints
- ✗ Oversaturated reds
- ✗ High colour running costs

WORKGROUP COLOUR LASER
1,200x600dpi, 32.0ppm mono, 22.0ppm colour, parallel, USB Hi-Speed, 10/100 Ethernet interfaces
PART CODE 01212701
DETAILS www.oki.co.uk

PERFORMANCE (see page 58)



CANON PIXMA iP4500

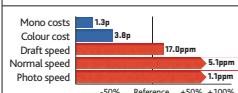


£62 inc VAT
From www.lambda-tek.com/componentshop



This is one of the best budget inkjets we've seen, beating pricier models for speed and quality. It takes five ink cartridges, including both dye and pigment-based blacks to create deep shadows in photos and pin-sharp text. Costs are exceptionally low, making the iP4500 cheaper to run than many laser printers. There's no screen or media card reader, but it does have two paper trays and an automatic duplexer, and can print on CDs.

INKJET PRINTER Five-colour inkjet, 9,600x2,400dpi maximum resolution, USB and PictBridge USB interfaces
PART CODE 2171B008AA
DETAILS www.canon.co.uk
FULL REVIEW Dec 2007



HP Color LaserJet 3600

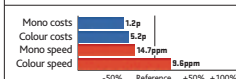


£247 inc VAT
From www.redstore.com



This is a fast USB laser printer with excellent print quality. The only consumable is the toner cartridges, which incorporate the drum. These are economical if you buy high-yield versions, and the device comes with 6,000 mono and 4,000 colour pages' worth of toner. Print speeds were quick at 14.7ppm mono and 9.6ppm colour, and we were impressed by the sharp mono text and accurate colour prints.

HOME/SMALL OFFICE COLOUR LASER 600x600dpi, 17ppm mono/17ppm colour, USB Hi-Speed interface
PART CODE Q5986A
DETAILS www.hp.co.uk
FULL REVIEW Feb 2008



TALLYGENICOM 8108N Colour Laser Printer

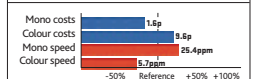


£112 inc VAT
From www.ebuyer.com



TallyGenicom's 8108N is the cheapest colour laser printer we've ever reviewed. Sharp mono text prints were produced at a phenomenal 25.4ppm. Colour prints were slower (at 5.7ppm) and cost an expensive 9.6p per page, but we were impressed by their quality. The 8108N has both network and USB ports, making it an ideal budget choice for a home or small office, despite its non-replaceable drum.

HOME/SMALL OFFICE COLOUR LASER 600x600dpi, 31ppm mono/8ppm colour, USB Hi-Speed 10/100 Ethernet interfaces
PART CODE 043792
DETAILS www.tallygenicom.co.uk
FULL REVIEW Feb 2008



KYOCERA Ecosys FS-1300D

★★★★★

£176 inc VAT

From www.morecomputers.co.uk

Kyocera's Ecosys FS-1300D is designed for simplicity. A multi-coloured LED ring clearly indicates status issues such as paper jams and low toner levels, and there are just two buttons: Start and Cancel. After we first installed the toner cartridge, the printer took about 15 minutes to charge the imaging drum. This consumes around half of the toner's 7,200-page supply, but happens only once in the printer's lifetime.

The latest version of Kyocera's installer is clear and easy to use and successfully auto-detected the printer, but it didn't automatically set it as the default printer. The standard paper tray can take up to 250 pages of A4, while a multipurpose tray pulls out from the front of the printer to take envelopes, non-standard formats, or 50 additional sheets of standard A4. Most items from the multipurpose tray printed cleanly, but envelopes came out slightly crumpled.

Although its greyscale prints of graphs, diagrams and illustrations were generally good, the FS-1300D fared poorly in our photo-quality image test. Fortunately, it's a good-quality text printer, with a reasonably fast integrated duplexer. There are three standard quality options: Draft, Proof and High, while a Custom menu allows you to set resolutions up to the full 1,200x1,200dpi. At the highest resolution, even the tiniest font sizes were extremely sharp and clear. At that resolution, 25 pages of mono text took the same time to print as they did in our 600dpi speed test, at 22.7ppm. We didn't have to



wait long for our first print, either, with a mono page emerging in 14 seconds. Duplex prints at normal quality printed at a fairly quick 12ppm.

What sets the FS-1300D apart in a market full of similar mono laser printers are its extremely affordable print costs. At just 0.82p per page it's one of the most economical printers we've seen, although it isn't quite as cheap to run as the slower FS-1030D (reviewed in *Shopper* 233), which costs 0.75p per page. There are no other consumables, and the photoconductor drum is guaranteed to last for three years or 100,000 pages.

Although this printer is best suited for personal use in a small or home office, there are plenty of options available to expand its capabilities. You can fit two extra paper trays for a maximum capacity

of 800 sheets, and memory can be expanded to 544MB. A network card is also available.

Although its image printing is mediocre, producing banded, grainy results on our high-resolution photo images, the FS-1300D did print clear text and usable charts and diagrams. At well under a penny per page, it stands out as an ideal choice if your running costs are paramount.

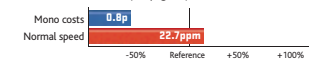
Kat Orphanides

SUMMARY

- ✓ Good-quality text
- ✓ Extremely low running costs
- ✗ Mediocre image prints

HOME/SMALL OFFICE MONO LASER
1,200x1,200dpi, 28.0ppm mono, USB
Hi-Speed interfaces
PART CODE 1102HS3EUO
DETAILS www.kyoceramita.co.uk

PERFORMANCE (see page 58)



CHOOSING A... Laser Printer

Follow the steps to find your ideal specs

RESOLUTION: 1,200x600dpi
MEMORY: 8MB
SPEED: 24ppm
INTERFACES: USB
PAGES PER MONTH: 5,000
PAPER TRAYS: 150-sheet A4
OPTIONS:

Recommended minimum in grey

1 Prices for A4 laser printers with specifications such as those above start at around £55. These models are fine for users who print less than one packet (500 pages) of paper a month. Look for good print quality, flexible drivers and running costs of below 2p per page. Ideally, it should store paper clean and flat in a horizontal tray and allow manual feeding of headed paper and envelopes with no creasing.

2 You'll have to spend more for a printer with the build quality and speed to cope with a heavy workload. Heavy users or small workgroups need up to 25 pages per minute (ppm), and whole departments need more. Bulk printing demands costs of 1p per page or less.

3 Four-pass colour lasers are available for around £130. They are cheaper, but much slower to print colour than a single-pass model. Fortunately even some of the most economical printers are now single pass.

4 Support for a printer language such as Printer Control Language (PCL) 6 or PostScript 3 means you can use the printer with any computer and even some PDAs.

5 Not all lasers print graphics well, but a 1,200dpi resolution helps. Colour lasers can often print high-quality graphics, but should have at least 32MB of memory.

6 A network adaptor allows you to connect a printer to an Ethernet network, so all the network users can print to it directly. Smaller groups can use a PC to host and share any printer using Windows' File and Print Sharing Wizard.

7 Duplex printing is an increasingly affordable option and lets you print on both sides of a sheet of paper automatically. A scanner/fax unit turns your printer into a multifunction peripheral. Large groups should get multiple paper trays to deal with headed paper and other stationery.

Also consider...

EPSON Stylus Photo R360

★★★★★

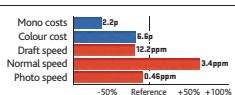
£81 inc VAT

From www.ebuyer.com

Despite unremarkable print speeds and higher-than-average running costs, the six-ink R360 is perfect if you're serious about home photo printing. It's a poor document printer, but our photos were almost flawless. Colour and shading were perfect, and we couldn't see any dithering or grain, even close up. Skin tones were true to life and all our images were rendered with clarity and distinction.



COLOUR INKJET PRINTER Six-colour inkjet, 5,760x1,440dpi maximum resolution, 30ppm mono/30ppm colour maximum speed, USB Hi-Speed and PictBridge interfaces
PART CODE C11C658021
DETAILS www.epson.co.uk
FULL REVIEW Mar 2008



LEXMARK Z1320

★★★★★

£32 inc VAT

From www.printerland.co.uk

Lexmark's Z1320 is one of the smallest and most affordable single-function inkjets we've seen. Unlike most budget inkjets, it combines reasonable print costs and speeds with good-quality document and photo printing. We were impressed by its clear and readable draft documents. Our only complaint is that its output tray is a little bit flimsy.



FOUR-COLOUR INKJET 4,800x1,200 resolution, USB Hi-Speed interface
PART CODE 20A0402
DETAILS www.lexmark.co.uk
FULL REVIEW Dec 2007

